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Delayed oesophageal perforation following endoscopic stapling of a pharyngeal pouch

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Abstract
Endoscopic stapling of pharyngeal pouches is gaining popularity and is said to be a quick procedure with minimal morbidity and mortality. So far, there have been few reported cases of any severe complications following this procedure. However, complications as with other treatment modalities can occur. A case of mediastinitis due to delayed oesophageal perforation following the stapling procedure is presented.

Key words: Pharynx; Diverticulum; Surgical Procedures, Operative; Complications

Introduction

Pharyngeal pouch (Zenker's diverticulum) is a mucosal protrusion through Killians triangle. It is a progressive disorder affecting mainly elderly people with no access to medical treatment. A variety of surgical procedures exist to treat this condition ranging from external excision[1] to Dohlman's[2] endoscopic approach. These surgical procedures all have a variable morbidity (four–47 per cent) and mortality (0.3–three per cent).[1] Endoscopic stapling of a pharyngeal pouch was a new procedure described in 1993.[3] It is said to be a simple and safe procedure associated with a short hospital stay and fast recovery. Patients are started on soft diet after the procedure and usually discharged on post-operative day one; consequently, its popularity is increasing. A case of delayed oesophageal perforation following endoscopic stapling is presented.

Case report

A 60-year-old man was referred to the outpatient department with a history of food regurgitation. Subsequent barium swallow demonstrated a deep pharyngeal pouch. He was admitted as a routine case and, under general endotracheal anaesthesia, the common wall between the oesophagus and the diverticulum was displayed using a bivalved laryngoscope. This common wall comprising the cricopharyngeus muscle and mucosa was simultaneously divided and stapled using and Endo-GIA 30 stapler. Three rows of overlapping staples were placed either side of the cut.

The following morning the patient made an uneventful post-operative recovery, was apyrexial, had no evidence of surgical emphysema and was swallowing well. He was observed over the next six hr and discharged home after eating a full lunch. One day later he attended the Accident and Emergency department due to breathing difficulties. He was found to be dehydrated, septic and had surgical emphysema on the right side of his neck.

A presumptive diagnosis of mediastinitis was made. He was resuscitated, kept nil by mouth and started on intravenous fluids, antibiotics and ranitidine. He made a good initial recovery, and a subsequent Gastrografin swallow demonstrated a moderate upper oesophageal leak. Unfortunately, three days later he became septic, requiring intensive care support and he eventually succumbed to overwhelming sepsis.

Oesophageal perforation following endoscopic stapling of pharyngeal pouches is now being documented. Scher and Richtsmeier[4] report an intra-operative tear following application of the stapling gun. The perforation was noted immediately and the mucosal laceration repaired endoscopically; the patient went on to an uneventful post-operative recovery. Hilton and Brightwell[5] also report an intra-operative oesophageal tear, where the patient underwent an immediate left neck exploration and repair of the defect.

To date, these perforations have been recognized during the operative stapling procedure. This report demonstrates that a delayed perforation can occur.

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